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Prof. Larry Goulder, Chair
And Members of the Economic and Allocation Advisory Committee (EAAC)
California Air Resources Board
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Chair Goulder and Honorable Members of the Economic and Allocation Advisory Committee:

I am writing on behalf of the Coalition for Clean Air ("Coalition") to request that the Economic and Allocation Advisory Committee (EAAC) recommend that the California Air Resources Board (CARB) incorporate measures into the AB 32 Implementation Plan to address community and environmental justice impacts. The Coalition is concerned that without proper safeguards, emissions trading likely under AB 32 may have adverse impacts on low-income communities and communities of color.

The EAAC was established to advise CARB regarding the implementation of the California Global Warming Solutions Act of 2006 (AB 32) and the cap and trade system to be implemented to reduce California's greenhouse gas emissions. Per AB 32, the cap and trade program is to be developed by January 1, 2011 and implemented in beginning of 2012. The purpose of EAAC includes: 1) evaluating allowance allocation strategies involving free allocation, auction, or a combination of both; 2) advising CARB regarding the costs and benefits of various options involving the distribution of cap and trade allowances/auction revenue; 3) providing CARB revisions to its economic analysis; and 4) preparing a report with its findings by end of 2009.

In this letter, the Coalition would like to focus on several provisions in AB 32 that expressly require consideration of cumulative and environmental justice impacts and would like to propose suggestions to prevent and mitigate such impacts.

A. HOT SPOTS.

1. Statutory Mandate.

AB 32 contains an express statutory mandate that any market mechanism must prevent hot spots. It states that a market mechanism, if adopted, must be designed “to prevent **any increase** in the emissions of toxic air contaminants or criteria air pollutants.”¹ CARB must also “Ensure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.”²

2. Analysis.

Carbon is always released together with co-pollutants. For example, when a power plant releases carbon, it is generally released together with particulate matter and other pollutants. When a refinery releases carbon, it is generally released together with mercury, hexavalent chromium and other co-pollutants. These co-pollutants have very significant localized impacts on the communities surrounding such facilities. If facilities increase their carbon emissions, they will simultaneously increase their toxic co-pollutant emissions.

A poorly designed carbon trading market may allow facilities to increase their carbon emissions by purchasing marketable pollution credits. Such credits may be generated by companies that have reduced their pollution in comparatively less polluted areas. In some global carbon trading programs, reductions have been generated in distant countries by farmers planting trees to sequester carbon, by “clean power” projects, and by myriad other carbon-reducing measures. While the increases in carbon from a local factory may be offset by reductions hundreds or thousands of miles away, the community living adjacent to that factory may be subjected to increases in toxic copollutants, black carbon, or other harmful localized emissions.

This is more than a hypothetical problem. It is now documented that the Regional Clean Air Incentives Market (RECLAIM) trading market in Los Angeles has resulted in the creation of toxic hot spots in communities of color. Professor Raul Lejano of the University of California at Irvine, and Professor Rei Hirose published a detailed analysis of the RECLAIM program in the highly regarded journal, *Environmental Science and Policy*. He concluded that “NO_x did concentrate in Wilmington due to RECLAIM, at a time when basin-wide emissions were

¹ CAL. HEALTH & SAFETY CODE § 38570(b)(2) (emphasis added).

² Health & Safety Code §38562(b)(2).

dropping.”³ The study found that while RECLAIM resulted in basin-wide pollution reductions, it created increases in toxic pollution in certain low-income communities of color in the Los Angeles area.

3. Policy Recommendation.

AB 32 explicitly requires CARB “to prevent **any increase** in the emissions of toxic air contaminants or criteria air pollutants” that may be created by pollution trading.⁴ Thus, CARB must prohibit any carbon trading that will result in **any increase** in emissions of toxic or criteria air pollutants, including black carbon, diesel engine exhaust, nitrogen oxides, sulfur oxides, volatile organic compounds (VOCs), mercury, hexavalent chromium, or any other toxic or criteria air pollutant. This goal can be furthered in at least two ways:

a. Zonal trading systems

As explained by Professor James K. Boyce, in zonal trading systems, the availability of permits is defined on a zone-by-zone basis. Zones can be defined based on criteria such as whether a particular zone is relatively more or less polluted, or whether a zone attains or fails to attain state and federal clean air standards. Trading can be constrained to allow trading within a particular zone, but to disallow trading that would increase pollution in an already polluted zone. Trading would be allowed if it reduces pollution in the already polluted area, but not if it increases pollution in the polluted area. Polluters in lower-priority zones can buy permits from polluters in higher-priority zones, but not vice-versa. In other words, zonal trading can create a “one-way valve” that allows pollution to leave a heavily polluted area, but not to enter such an area.

Zonal trading had already been implemented in the RECLAIM program. The South Coast Air Quality Management District (SCAQMD) established two zones under RECLAIM: Zone 1, where pollution is more severe; and Zone 2, where pollution is less severe. Facilities in Zone 1 can buy permits only from other facilities in the same zone; facilities in Zone 2 can buy permits from either zone. One impact of the RECLAIM zonal trading system is that average permit prices have been roughly eight times higher in Zone 1 than in Zone 2.⁵

³ R. Lejano, R. Hirose, “Testing the assumptions behind emissions trading in non-market goods: the RECLAIM program in Southern California,” *Environmental Science & Policy*, Volume 8, Issue 4, August 2005, Pages 367-377).

⁴ CAL. HEALTH & SAFETY CODE § 38570(b)(2) (emphasis added).

⁵ Lata Gangadharan, “Analysis of prices in tradable emission markets: An empirical study of the Regional Clean Air Incentives Market in Los Angeles,” *Applied Economics* 36: 1569-1582, 2004.

While RECLAIM's 2-zone approach has proven inadequate to prevent the creation of toxic hot spots in communities of color, a more fine-tuned approach is possible. CARB has already retained researchers at the University of Southern California, Occidental College, and the University of California, Berkeley, "to develop a methodology using available information to assess the potential cumulative air pollution impacts of proposed regulations to implement the Scoping Plan" and "to identify communities already adversely impacted by air pollution as specified in Health and Safety Code section 38750(b)(1) before the adoption of a cap-and-trade program." CARB should build upon this research and create a zonal trading system that prevents trades that would increase pollution in those communities identified by the aforementioned study as "communities already adversely impacted by air pollution."

b. Co-pollutant surcharge

Prof. Boyce points out a second way to incorporate co-pollutants into AB 32 implementation policy, which is to levy a surcharge on carbon permits in overburdened jurisdictions, and to dedicate the surcharge revenue to community benefits funds in the same jurisdictions where it is collected. Prof. Boyce points out that attractive features of this option include the following:

- The use of surcharge revenue for this purpose would reduce the need to allocate revenues from carbon permit auctions to CBFs.
- There would be a tight nexus between the fee (surcharge) and its use.
- The surcharge would promote greater emission reductions in places where abatement benefits are greater due to high co-pollutant burdens.
- It affirms the principle that the "sink" functions of air (as a medium for disposal of wastes) belong to the people who breathe it.

Prof. Boyce explains that to implement such a system, CARB would again identify overburdened locations where the co-pollutant surcharge would be levied, at the time of carbon permit surrender in the case of stationary sources or and the time of fuel delivery in the case of residential and mobile sources. By increasing the price of fossil fuels above what it would be in the absence of the surcharge, this would provide an incentive for greater emissions reductions in these locations. The revenue from the surcharge would then be allocated to CBFs in the same locations.

B. Cumulative Impacts.

1. Statutory Mandate.

AB 32 provides that CARB must “[c]onsider the potential for direct, indirect, and cumulative emission impacts from these mechanisms, including localized impacts in communities that are already adversely impacted by air pollution.”⁶

2. Analysis.

As discussed above, Professor Lejano’s analysis of the RECLAIM trading program shows that RECLAIM resulted in actual increases in nitrogen oxide pollution in the Wilmington community. While regional NOx emissions may have decreased, due to the higher cost of control for refineries, those facilities were net credit purchasers and increased emissions in Wilmington.

Greenhouse gas trading may create similar results. Many industry sectors are clustered in certain communities. For example, oil refineries are clustered in the Wilmington/Carson area in Los Angeles, and in Western Contra Costa County in the Bay Area. If these facilities have a higher cost of control compared to other industry sectors, they are likely to be net credit purchasers and may either fail to decrease their emissions, or may actually increase greenhouse gas pollution. If so, they will simultaneously be increasing co-pollutant emissions with possible localized impacts. This would constitute a “cumulative impact” within the meaning of AB 32. CARB’s methodology by design ignores such impacts by failing to consider the cumulative impacts as well as relative costs of control by industry sector and location.

3. Policy Recommendation

The Zonal Trading System and Co-Pollutant Surcharges discussed above would both help to mitigate cumulative impacts of a carbon trading system as required by law. Creating zones around heavily polluted communities that would allow pollution decreases in those communities but not pollution increases would directly mitigate cumulative impacts on “communities already adversely impacted by air pollution.” Likewise, a surcharge on carbon permits in overburdened jurisdictions would have a similar effect in incentivizing emission reductions in such areas.

C. Distributive Justice and Co-Pollutant Reduction Co-Benefits.

a. Statutory Mandate.

AB 32 addresses the equitable distribution of co-pollutant reduction benefits. The law states that climate change regulation should complement “efforts to achieve and maintain

⁶ *Id.* at § 38570(b)(1).

federal and state ambient air quality standards and to reduce toxic air contaminant emissions.”⁷ Allowing facilities to purchase allowances to maintain existing emissions of toxics, as well as of criteria pollutants in nonattainment areas, would undermine the statute’s goal of improving air quality. AB 32 also requires CARB to maximize the environmental and economic co-benefits of any market-based system,⁸ and nowhere are those co-benefits more important than in already-burdened communities. Finally, and most importantly, AB 32 explicitly requires the state to “***direct public and private investment toward the most disadvantaged communities in California.***”⁹

b. Analysis.

A trading system could fail to equitably distribute the co-pollutant reduction co-benefits of climate regulation. Many facilities that reduce their carbon dioxide emissions are likely to simultaneously reduce harmful co-pollutant emissions. For example, actions such as limiting flaring from refineries, capturing methane from landfills, and making industrial processes more energy efficient will reduce global warming emissions as well as conventional air pollution. If facilities use a market mechanism to maintain, rather than reduce, their emissions, then neighboring communities will fail to receive a co-pollutant reduction benefit. Low-income communities are concerned that facilities may claim they are “green” due to their purchase of offsets or allowances for their greenhouse gas emissions, while continuing to spew co-pollutants from their stacks.

To meet AB 32’s requirement that greenhouse gas reduction measures generate environmental co-benefits and improve air quality in the state’s most burdened areas, a market-based system, if adopted, will need to ensure that a market-based system fosters improvements in air quality in areas that have the highest air pollution burden in the different air basins. It is necessary to ensure that any GHG emissions reduction program ensure that the communities continuing to bear the higher pollution burden will participate in and benefit from these GHG reduction efforts, specifically when market-based compliance mechanisms are designed and implemented.

c. Policy Recommendation

CARB’s Market Advisory Committee in its June 30, 2007 report recommended that most emission credits should be auctioned, rather than handed out for free. The Coalition agrees with this recommendation. The government should not hand out a public commodity (clean

⁷ *Id.* at § 38562(4).

⁸ *See id.* at § 38501(h); § 38562(b)(6); 38570(b)(3).

⁹ *Id.* at § 38565.

air) to polluters for free, only to allow the polluters to sell such pollution credits on the free market for a profit. This has been analogized to the auctioning of public radio spectrum.

The Coalition recommends that a significant portion of the revenue generated by the auction of allowances be earmarked for community benefits in the areas most adversely affected by pollution. The allocation responsibility should be established upstream before the auction of allowances, hence generating a funding stream for community improvements early in the process.

California Assembly Bill 1405 (DeLeon), pending in the state legislature, would require that a minimum of 30% of the revenues generated under AB 32 be deposited into a Community Benefits Fund (CBF). The bill defines “the most impacted and disadvantaged communities as those areas within each air basin with the highest 10 percent of air pollution impacts, taking into account air pollution exposures and socioeconomic indicators.” Within these communities, the CBF would provide competitive grants for projects for purposes such as reducing emissions of greenhouse gases and co-pollutants, minimizing health impacts caused by global warming, and emergency preparedness for extreme weather events caused by global warming. Possible CBF-funded projects could include:

- Replacement and/or retrofitting of gross-polluting vehicles (junking clunkers);
- Energy efficiency upgrades;
- Upgrading high-polluting facilities;
- Creation of cooling centers in low-income communities;
- Asthma treatment and prevention;
- Emergency planning and preparedness;
- Emergency evacuation, transportation, housing (i.e. Katrina-prevention);
- Transit improvements.

CONCLUSION

By incorporating these concepts into the implementation of the California Global Warming Solutions Act California will be: a) treating communities as partners in the market-based approach; b) accepting our responsibility to minimize the impacts of pollution at a community level; and c) following the requirements as well as the intent of the law. Thank you for considering our comments.

Sincerely,

Richard Toshiyuki Drury

Coalition for Clean Air Comments to EAAC
Community Impacts and AB 32
October 6, 2009

Attorney for Coalition for Clean Air

Cc: Mary Nichols, Chairman
Ellen Peter, Chief Counsel
James Goldstene, Executive Officer
Shankar Prasad, Coalition for Clean Air

Attachment: R. Lejano, R. Hirose, "Testing the assumptions behind emissions trading in non-market goods: the RECLAIM program in Southern California," *Environmental Science & Policy*, Volume 8, Issue 4, August 2005, Pages 367-377